

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/045067 A1

- (51) International Patent Classification⁷: **C12Q 1/32**, G01N 33/50, 33/68, A61P 15/08
- (21) International Application Number: PCT/GB2004/004683
- (22) International Filing Date: 8 November 2004 (08.11.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0325968.6 6 November 2003 (06.11.2003) GB
- (71) Applicant (for all designated States except US): **UCL BIOMEDICA PLC** [GB/GB]; Finance Division, University College London, Gower Street, London WC1E 6BT (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MICHAEL, Anthony** [GB/GB]; Department of Biochemistry & Molecular Biology, Royal Free & University College Medical School, University College London, Rowland Hil Street, London NW1 2PF (GB). **THURSTON, Lisa** [GB/GB]; Reproduction & Development Group, Department of Veterinary Basic Sciences, Royal Veterinary College, Royal College Street, London NW1 0TU (GB).
- (74) Agents: **BENTHAM, Andrew et al.**; J.A. Kemp & Co., 14 South Square, Gray's Inn, London WC1R 5JJ (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVEMENTS RELATING TO SEMEN PRESERVATION

(57) Abstract: The present invention provides a method for determining the suitability of a sample of mammalian semen for cooling and/or cryopreservation or storage, which comprises: (a) providing said sample of semen; (b) determining the level of a hydrophobic stimulator of 11 β -HSD activity in said sample; and (c) assessing, from the level of 11 β -HSD stimulator determined, the suitability of the semen sample for cooling and/or cryopreservation or storage. The present invention also provides a method of obtaining a hydrophobic product that improves the tolerance of mammalian semen to cooling and/or cryopreservation or storage, a method of improving the survival rate of sperm intended for cooling and/or cryopreservation or storage and a method of performing an assisted conception/reproductive procedure comprising contacting an oocyte with sperm obtained by a method according to the present invention.

WO 2005/045067 A1